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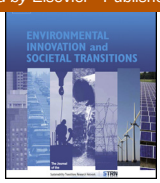

Discursive regime dynamics in the Dutch energy transition

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ABSTRACT

Since its introduction in the National Environmental Policy Plan in 2001 the notion of 'energy transition' is firmly rooted in the Dutch energy debate. Despite political efforts to shift to a sustainable energy system, the Netherlands is lagging behind other European countries. Scholarly literature generally ascribes such slow developments to the dominant role of incumbents. In this paper we explore how prominent incumbents of the Dutch energy system discursively frame the energy transition by unravelling their existing and evolving storylines. Our results show that decarbonization in the context of a European energy market is currently seen as the dominant driver for the energy transition, linked to discursive elements on keeping the energy supply secure and affordable. We found tensions within this dominant storyline and emerging storylines with the potential to undermine the dominant one. In response, incumbents are discursively repositioning themselves, thereby restructuring coalitions – possibly indicating *discursive regime destabilization.*

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1. Introduction

Secure, affordable and clean energy is high on the political agenda in European countries after the alarming debates around energy supply, climate change and the implications of energy production and consumption for a healthy and safe environment. These debates gained new momentum in the wake of the Fukushima nuclear disaster. In 2009, the European Parliament and Council have agreed on specific targets to increase the share of renewable energy in the total energy supply in 2020 to 20%, to increase energy efficiency and reduce emissions of greenhouse gases with 20% compared to 1990 levels (Klessmann et al., 2011). These targets are complemented with two strategy papers: a *Roadmap 2050* and a *Power Perspective 2030* (EC, 2011; ECF, 2011), that show the commitment of the European Union to achieve the 20–20–20 energy targets and pave the ground for an even longer-term energy transition.

In the Netherlands, the notion of an 'energy transition' is firmly rooted in the country's energy debate since its introduction in the National Environmental Policy Plan in 2001 (VROM, 2001). With that, the Dutch energy system was one of the first where transition management – a new governance approach for sustainability (Loorbach, 2007; Rotmans et al., 2001) – was applied in an integral manner (Kemp, 2010; Kern and Smith, 2008; Loorbach et al., 2008; Smith and Kern, 2009). However, despite the policy objectives, the Dutch energy transition is considerably lagging behind other EU countries: the Netherlands managed to only slightly increase the share of renewable energy in final energy consumption from 2.6% in 2006 to 3.8% in 2010, while the average share in the EU-27 has increased from 9.0% to 12.4% (Eurostat, 2012). Recent literature focusing on the Dutch energy system concludes that the main explaining factor for this lagging behind is a strong fossil fuel regime in which incumbents play a dominant role (Kern and Smith, 2008; Van der Loo and Loorbach, 2012).

On the surface, it seems that incumbent actors and interests are thus able to dominate the pace and direction of the energy transition and mainly promote a 'greening' of the fossil-based centralized system instead of a more radical transition departing from the existing system. This observation is in line with early transition studies in which regimes have (often) been conceptualized as homogeneous entities that are generally robust to change (Fuenfschilling and Truffer, 2014; Geels and Schot, 2007, 2010; Holtz et al., 2008; Kemp et al., 1998). Accordingly, a transition is seen as the result of regimes which destabilize or open up as a consequence of external shocks, internal structural problems or bottom up innovations (Smith and Raven, 2012; Turnheim and Geels, 2012; Verbong and Loorbach, 2012). More recent literature, however suggests that regimes can also be drivers of radical change (Stenzel and Frenzel, 2008; Van der Vleuten and Högselius, 2012). With this in mind, Loorbach and Verbong (2012, pp. 320–321) argue that: "operationalization of the regime concept in the context of the analysis of on-going transitions calls for developing a more refined understanding of regime structures and regime actors, as well as of their interaction with emerging niches".

In this paper we address this theoretical need for a more refined understanding of regimes by conceptualizing a regime as a dynamic constellation of diverse actors characterized by shared values, expectations and understanding about the function the regime provides to meet a societal need (e.g. energy production and consumption) and its future development (Frantzeskaki and de Haan, 2009; Frantzeskaki and Loorbach, 2010; Hermans et al., 2010; van der Brugge, 2009). In this paper we specifically aim to analyse regime dynamics in the Dutch energy transition by investigating the language incumbents used to give meaning to the changing world around them, and ask whether changing discursive positions amongst incumbents might in fact offer opportunities for more radical societal change.

In the following sections, we first touch upon theoretical work on discourses and regimes to more specifically underpin our research question. We then introduce our method of argumentative discourse analysis to scrutinize the Dutch energy transition from the perspective of incumbent actors. We propose that our examination reveals discursive destabilization of the Dutch energy regime through observed tensions within the dominant discourse and challenges posed to it by newly emerging developments. We do not imply that a discursive shift witnessed amongst a group of incumbent actors directly implies a following transition, but rather argue that it could be a prerequisite for any transition to take place. In that sense any discourse analysis in the broader context of a transition is limited and in no way predictive, yet it does shed light on the underlying dynamics within a particular field and regime that might be a precondition for any transition to occur.

2. Understanding regime dynamics through discourse

Transitions can be conceptualized as a response to persistent problems that can no longer be effectively addressed by (only) optimizing existing structures and practices within a societal (sub)system (Rotmans and Loorbach, 2010). The energy system can be defined as "all actors and artefacts that together produce the societal function of energy" (Verbong and Loorbach, 2012, p. 9). This system is in open exchange with its environment and other systems (e.g. ICT, mobility or construction), and generally develops path-dependently based on existing structures which are further developed and optimized through innovation. A transition in such a system is understood as the shift from one dominant regime to another as the result of a combination of external pressures, internal tensions following an enhanced regime lock-in and matured radical alternatives (Loorbach and Rotmans, 2010). Although regimes are conceptualized in slightly different ways in transitions literature, e.g. regimes within socio-technical systems (Rip and Kemp, 1998) or in societal systems (Rotmans, 2003), they share the following commonalities: (1) a regime consists of a long-term coalition of actors such as businesses, politicians, citizens or NGOs; (2) these coalitions share a set of formal and informal rules that guide their activities; and (3) a regime implies a shared vision for the future building on some form of collective knowledge shared by the actors involved (Hermans et al., 2010).

This collective knowledge and shared vision for the future can be empirically studied through texts, both written and spoken, using a discursive approach. Discourse can be defined as "a specific ensemble of ideas, concepts, and categorizations that are produced, reproduced and transformed in a particular set of practices and through which meaning is given to physical and social realities" (Hajer, 1995, p. 44). Discourses become apparent through the language individuals and organizations use. This language in use takes the form of storylines, narratives with which actors provide meaning to the world around them. Around these storylines discourse coalitions are formed of actors that feel attracted to a (set of) storyline(s) and by adopting these storylines they get reproduced. The storylines a discourse coalition draws upon suggest a common understanding amongst the actors involved. When a specific discourse coalition has risen to dominance over a system it has achieved discursive hegemony and thereby has become reminiscent of a regime (Hermans et al., 2010). Key actors within a discourse coalition play a decisive role in determining the issues deemed relevant for discussion. By the storylines these key actors draw upon they are able to influence or even predetermine the problem definition and direction in which potential solutions are sought (Hajer, 1995, 2006). As key actors we focus on incumbents in the Dutch energy system (Arentsen et al., 2001; Smink et al., 2013). Based on the above, we propose to analyse the storylines of the main incumbents in the Dutch energy system in order to identify the discursive hegemony within the Dutch energy regime as the first objective in this paper.

Since we are specifically interested in the dynamics within the regime our second objective relates to discursive change. Both discourse and transitions literature suggest that a dominant discourse coalition or regime, which can be stable for decades, will be challenged and eventually open up and break down when societal needs change and alternative constellations appear with discourses that are better adapted to these changing circumstances (Grin et al., 2010; Hajer, 1995). Accepting the notion that the energy system is in transition (whatever this may mean exactly) implies that the existing discursive hegemony of the regime comes under increasing pressure. Therefore, our second objective is to identify developments that put pressure on the dominant discourse as put forward by these incumbents. For this we draw upon Garud et al. (2010) who recommend to focus on 'categories in the making' in their longitudinal study on the changing meaning of nuclear energy. This concept not only helps to understand how and why categories and their meanings change over time, but it also provides indicators for likely future developments. To summarize, the objective of this paper is to scrutinize the dominant discourse and discursive opening-up of the Dutch energy regime by focusing on key actors within the regime. In this context, we aim to illustrate how these actors give meaning to the changes they observe in the Dutch energy system and to discuss likely implications for regime dynamics in the Dutch energy transition. Therefore, the main research question is: What is the dominant discourse amongst incumbents in the Dutch energy regime regarding the future of the energy system and which developments put pressure on their discourse?

3. Research design

In order to empirically explore the Dutch energy regime and its recent dynamics, we used argumentative discourse analysis (ADA; Hajer, 1995). At the centre of an ADA analysis are the storylines that actors use to give meaning to their world. Storylines play a role in clustering collective knowledge, substantiating the positioning of actors, and in cementing existing coalitions amongst actors in a given domain or developing new ones. Storylines can include metaphors, analogies, historical references, clichés and appeals to collective fears or senses of guilt. To illustrate this concept we use Hajer's example of 'acid rain' as a storyline that related previously singular and unrelated events such as dying of fish, lakes, and trees and the corrosion of buildings to industrial pollution. Thereby, the acid rain storyline can change how e.g. a fisherman or forester perceives reality by providing a narrative to relate dying fish and trees to industrial smoke stacks (Hajer, 1995, p. 64).

As already stated in Section 2, we are interested in both uncovering the dominant storyline(s) within the Dutch energy regime as well as how regime discourse changes over time. According to Hajer change may take place "through the emergence of new storylines that re-order understandings" (Hajer, 1995, p. 56). In our research we draw upon Garud et al. (2010) to focus on 'storylines in the making' as those emerging narratives that may point towards future developments and put pressure on the dominant storyline. As can be expected, such storylines in the making are less structured and coherent than the dominant storyline, as we will show in the next section. It is important to note here that, although we are interested in discursive change, this research provides only a snapshot of existing storylines shared by incumbent actors and the developments that inform storylines in the making. Capturing discursive change over time would require a longitudinal approach tracing the dissemination and adaption of storylines in the making within the regime. Such a longitudinal approach falls outside the scope of this paper.

The research was carried out in three consecutive phases: (1) scoping; (2) data collection; and (3) data analysis. The main data sources were actors' official communications (e.g. annual reports, newspaper articles, associations member magazines) and expert interviews. Annex 1 provides an overview of the interviews conducted for this research. In total 19 stakeholders were interviewed by the first author of which 6 explorative and informal (telephone) interviews with intermediaries in the initial scoping phase, followed by 13 formal interviews using a semi-structured interview protocol (Baarda et al., 2000). The interviews were carried out between May and August 2012. An overview of the questions that were asked can be found in Annex 2. These formal interviews have been fully transcribed and analysed using MAXQDA qualitative data software. An elaboration of each of the three phases of the research is presented in the following paragraphs.

3.1. Scoping

ADA prescribes a scoping phase to get acquainted with the system under study (Hajer, 1995). As respondents in the scoping phase we approached six intermediaries with a broad overview of the energy system. During the scoping phase it became clear that Energie-Nederland, the Dutch association for energy businesses, plays an important role in voicing the viewpoints of energy incumbents. As such, we approached Energie-Nederland and its members as a nexus for the Dutch energy regime and we decided the association formed an appropriate starting point for our research.

3.2. Data collection

Energie-Nederland has a total of 57 members, amongst which larger and smaller energy companies, the majority of which are active in the utility (gas and/or electricity) sector. Initially, representatives of Energie-Nederland were interviewed, as well as respondents from seven of its member organizations the majority of which from large utilities. We also included a respondent from GreenChoice, a relatively new and small player. In this sample GreenChoice is atypical since it only provides "green" energy. However according to the respondents contacted in the scoping phase the company has established itself over the last decade as an important player in the energy sector "the largest of the smaller energy companies" and was therefore included in our analysis. Through snowballing professionals

from government, knowledge and other advocacy groups were interviewed that engage with Energie-Nederland on a regular basis. Respondents were selected based on their strategic position within the organization, often board level or public affairs officers. Although the sample only covers a selection of actors involved in the Dutch energy system, we assume that through our selection process we have included the main incumbents that have a key role in influence and reproducing the dominant discourse. Respondents were interviewed on personal title, and personal anonymity was granted in the presentation of the results; therefore only the organizational context is mentioned. It should be stressed that the views provided are those of the respondents and not necessarily that of the organization they work for. Albeit only a snapshot, the interviews provide images the respondents have of the energy system, its future and their discursive position in it.

3.3. Data analysis

The interview transcripts have been cut into segments which were labelled in an open coding process using MAXQDA qualitative data analysis software. Open coding was followed by axial coding in which coded segments are related to each other in an iterative process (Boeije, 2009). We will illustrate the procedure with an example from the interview with the respondent of NUON:

> "The main challenge is of course the |transition to a sustainable energy supply | to a CO_2-neutral energy supply | in 2050 |"

In this specific case the whole segment was coded as "challenge", the following two segments marked by brackets were labelled together as "energy transition" and separately as "sustainable energy" and "CO_2", and the last segment was labelled "time frame". The following interpretive observations can be made based on this segment: first of all, the concept of transition is used by the respondent to describe challenges regarding the future of the energy system. Supposedly, this transition is towards a different kind of energy supply that is sustainable or CO_2-neutral, which apparently are more or less interchangeable concepts for this respondent. And this transition takes a long term – up to 2050.

With the help of the MAXQDA software then all segments with similar labels could be retrieved and compared across the interviews. By analysing, interpreting and linking frequently recurring concepts and categories across the different interviews, a dominant storyline could be reconstructed which is presented in the next section. Although some elements of this storyline were more prominent with one respondent than with others, the constituting elements were encountered in some form with all respondents. Together it provides a more or less coherent picture of how incumbents perceive the functioning of the energy system and the main challenges that it faces regarding the future.

In addition to reconstructing the dominant storyline we reflected upon coded segments that point towards tensions within this dominant storyline and the emergence of new storylines in the making. We identified these through interview segments that signal confusion, insecurity, conflict and marginalization or exclusion of other storylines (in the making). An example of labelling such a signal is provided based on a segment of the interview with the respondent of Essent:

> "Look, I would like to believe that we could supply all energy from wind turbines, when someone tells me a good story about how we can guarantee affordability, security and sustainability through wind turbines, with some magic trick or something, but that is all still long term thinking."

This segment was labelled as "marginalization". The respondent implies that a magic trick would be needed in order to supply all energy with wind turbines. The authors interpret this as showing disdain for those who do think that all energy can be supplied with wind energy. Thereby, this segment can be interpreted as a marginalization of storylines of discourse coalitions that support the development of wind energy. Through marginalization, respondents also acknowledge the existence of competing storylines.

A point of concern is that the original data were in Dutch and the quotes that were used needed to be translated into English. This concern has been dealt with by verifying the results with the respondents. A second point of concern relates to the pervasiveness of discourses, also those of the authors, in

Table 1
Overview of dominant storyline, its constitutive elements and tensions.

Dominant storyline	Decarbonization in a European market, while keeping the energy supply secure and affordable				
Elements constituting dominant storyline	Climate change is main driver for transition	Decarbonization is only one of three pillars of energy policy	Energy system should be left to market forces	Energy system should be governed at EU-level	ETS should be leading in reducing CO_2
Tensions within dominant storyline	Energy system should be left to the market, but the market requires additional effort to function properly		Government should create favourable low carbon investment conditions, but it should not intervene in the market		

all written and spoken texts. Therefore, we follow Scrase and Ockwell's (2010) to invite readers to critically reflect on the discourses we draw upon and the storylines we construct in order to draw their own conclusions from our analysis.

In the next section the dominant storyline and storylines in the making that challenge the dominant one are presented and illustrated with representative quotes from the interviews. To validate the storylines and use of quotes, a concept version of the paper has been checked and verified with the respondents. In general the storylines were recognizable for respondents and some minor adaptations have been made based on their feedback.

4. Incumbents' storylines on the energy transition in the Netherlands

We identified a dominant storyline on the future of the Dutch energy system (Section 4.1) and found inherent tensions around understanding of the energy market and the role of the government (Section 4.2), as well as four storylines in the making around new developments that challenge the dominant discourse as (re)produced by incumbents in the Dutch energy system (Section 4.3). Table 1 gives an overview of the dominant storyline, its constitutive elements and the tensions within the dominant storyline that were encountered during this research.

4.1. Dominant storyline

Based on the empirical data, we identified a relatively coherent storyline that is shared by most interviewees: they consider tackling climate change as the main challenge for the energy system, but securing the energy supply and keeping it affordable is seen as equally important. As the incumbents of the Dutch energy system increasingly operate at a European scale, the decarbonization challenge should be taken up at European level as well. Although some respondents view specific points differently, they largely share a storyline that can be summarized as 'decarbonisation in a European market, while keeping the energy supply secure and affordable.' We elaborate on the different elements constituting this storyline in more detail below.

Societal and political concern about climate change is mentioned as the main driver of the energy transition by most respondents. Therefore reducing CO_2-emissions is generally seen as the main challenge regarding the energy system. Although the respondent from VNO-NCW puts more emphasis on improving energy and resource efficiency as a key competitive concern: "resources and energy become scarcer and more expensive, which makes it interesting to develop more efficient techniques." Specific reduction goals were mentioned for the year 2050, e.g. the respondent of Delta states that his company "has the ambition to be CO_2-neutral by 2050". In his view, nuclear power can be part of that mix. In the same line, the respondent of Energie-Nederland formulates it as follows:

> "In 2050 we want to realize a CO_2-neutral energy supply with as much renewable energy as possible. However, because we estimate that it will not be possible to run on 100% renewable

> energy in 2050, we should also think about how to involve fossil energy in a CO_2-neutral way. That means applying CCS[1] to coal and gas fired power plants."

While constituting the main challenge, the decarbonization goal is often displayed by respondents as conflicting with the other pillars of the 'golden triangle' of security, affordability and sustainability. According to the respondent from VEMW "often the issue is looked at from only one side, like sustainability is something that can be isolated from the energy discussion." The respondent from Essent adds:

> "The tendency to prioritize renewable energy comes at the expense of security and affordability. [. . .] We should catch up on the renewables goal, but in a way that does not cannibalize the other two."

Most respondents, including that of GreenChoice, agree that the energy system should rely on market forces for its development and organization, therefore market based mechanisms should be leading in achieving the decarbonization goals. As the respondent from VEMW formulates it:

> "We focus strongly on the market, after all we all agreed in Europe to organize our energy supply through the market. We think that that is a good idea, because in a market everyone can play a role in providing solutions for this enormous problem."

The respondent working with Essent goes a step further: "markets provide information about the future. When you can sell your electricity ten years ahead, you can basically look into the future." The respondent from VNO-NCW believes that market forces will organize sustainability: "businesses see that resources and energy become scarce and therefore markets are developing in those areas internationally."

Incumbents largely agree that without government intervention, the market will find the most cost-efficient solution. In their view, the government should not support specific technologies – picking winners – but creating the conditions for the market to work properly. Paradoxically, incumbents expect that the government does play an important role in providing long-term investment security. The absence thereof is identified as one of the main obstacles for investing in sustainable solutions. As the respondent of E.on puts it:

> "We would love to invest in the Netherlands as E.on Benelux, but we have difficulties convincing our German colleagues. They make lists of the most attractive countries to invest in Europe. They basically look at two things: One is of course profitability, they do want to make some money. But two is stability 'how sure can you be that you will get your money back?' Well, the Netherlands does not show up in the top ten."

The respondent from NUON puts the ball in the court of the Ministry of Economic Affairs: "the Dutch EL&I [Ministry of Economic Affairs] supports the idea of the market very much, taking care that the market can develop its own initiatives, but thereby it is also very dependent on those businesses."

With regard to the level at which the energy system is organized most respondents observe that while energy used to be organized at national scale, the European scale becomes increasingly important in order to make use of the comparative advantages of different countries. Therefore, they believe it should be regulated at EU-level as well. The respondent of E.on states:

> "There should be much more control from a European perspective, e.g., what happens where? We are a pure European player; we are present in many European countries. It is really inefficient when every country would be achieving its goals by itself."

Following from the above, the European Emissions Trading scheme (ETS), a market based mechanism to reach the decarbonization goals at a European level, is seen as the preferred instrument to get to a more sustainable energy system. According to the respondent of Eneco "The ETS is one of the most important drivers for renewable energy." The respondent from VEMW adds: "By giving CO_2 a price,

[1] Carbon capture and storage.

by making the right to emit CO_2 scarce, everyone will take into account the effects of sustainability when investing, next to the effects on supply security and costs."

Based on the above, the dominant storyline can be summarized as: "decarbonisation in a European energy market, while keeping energy supply secure and affordable"

4.2. Tensions within the dominant storyline

Next to the dominant storyline that is shared by most respondents, different ways in which incumbents views diverge from or question the dominant storyline were identified. First, while the experts agree that development of the energy system should be left to market forces, some argue that the energy market requires additional effort and time to function properly, especially concerning removing barriers for new entrants. In this respect, the respondent of VEMW states that: "There are a lot of barriers in terms of regulation, access requirements for grids and the like, which makes it difficult for new parties with new solutions to access the market, and thereby have little chance that their solution or idea will contribute to solving the energy issue." Regarding the role of government, two opposing storylines emerge, which were interestingly often mentioned both by single respondents. Respondents agreed that the government should create favourable investment conditions in order to decarbonize the energy system. However, once the government does take measures towards such conditions it is criticized because such interventions could threaten the investment climate. Thus, it is argued that government intervention should be minimized. A frequently addressed example of such intervention concerns the introduction of a coal tax[2] early 2012. This coal tax was both lobbied in favour and heavily opposed by different incumbents, thereby dividing the Dutch energy regime. An unexpected coalition of companies with interests in natural gas (Dong Energy, Eneco and Shell) lobbied together with the environmental NGO Stichting Natuur en Milieu in favour of the coal tax out of sustainability concerns, according to the press release[3]. Traditional energy companies that own coal fired power plants and were hit by the measure were not amused, as the respondent of E.on illustrates:

> "What frustrates us is that the same MPs that shout that the investing climate should provide long-term stability, now do this. [...] So, we feel betrayed[4]. For us this is a clear example of changing the rules during the game."

Moreover, in response to introduction of the coal tax some respondents wish to separate what they refer to as 'the market' from democratic processes and even put the first above the latter. As the respondent from Essent puts it:

> "You lose your faith in the market when there are too much interventions and market undermining activities."

Unexpectedly, the views expressed by the respondents from E.on and Essent are supported by the respondent from the Ministry of Economic Affairs:

> "A stable investment climate is crucial. Everyone always looks at the government and says the Dutch government has had shaky renewable energy policy for years. But the [political] parties that say this are the same that suddenly introduce a coal tax. This time it is on coal, but still it is unreliable policy. That does not help for the investing climate, and that does not look good on the Netherlands."

It appears that rather than agreeing with democratically decided government policy to introduce measures to make the energy system more sustainable, the respondent of the Ministry of Economic

[2] These taxes formed part of the Spring Agreement, which was reached in a very short period after the governing coalition stepped down on the 23rd of April 2012, in order to carry out austerity measures until new elections would take place.

[3] Dong Energy, Eneco, Shell and Stichting Natuur & Milieu support coal tax: http://corporatenl.eneco.nl/nieuws_en_media/Persberichten/Pages/Kolenbelasting-maakt-Nederlandse-economie-sterker-enduurzamer.aspx.

[4] 'We voelen ons daardoor wel wat in het pak genaaid'.

Affairs sides with respondents from incumbent energy companies that securing a stable investment climate is more important.

4.3. Storylines in the making

This section covers 'storylines in the making' that were encountered throughout the research; new narratives that do not fit to the dominant storyline. Four such themes around which we found storylines in the making were brought up repeatedly and by different respondents, knowing:

1. Germany's Energiewende;
2. Decentralization of the energy system;
3. New players entering the energy system; and
4. Natural gas as transition fuel

Since the storylines are (still) in the making, it was more difficult to pinpoint the core of the storylines than with the dominant storyline. The storylines in the making will be discussed in more detail below.

4.3.1. Germany's Energiewende

Different respondents mentioned the Energiewende, often questioning its direction and swiftness and already see these developments affecting the Dutch energy system. The respondent from GDF-Suez stated:

> "I was overwhelmed by what has happened in Germany the last two years that was above all expectations. So maybe a whole new paradigm is emerging".

This comment illustrates that incumbents are baffled by the rapid developments across the border in Germany. However, respondents had different ideas on what the drivers for the Energiewende are, how it will develop in future and what the effects on the Dutch energy system are, showing that a shared storyline on Germany's Energiewende and its (potential) effects on the Netherlands is currently still in the making. Germany's Energiewende storyline in the making undermines the dominant storyline on two points. First, it questions the centrality of a (coordinated) European approach to decarbonization. Second, since the Energiewende is not only undertaken with decarbonization in mind (Bosman, 2012) it questions this goal as main driver for the energy transition.

4.3.2. Decentralization

The clearest challenge which came back in almost all interviews is that of decentralization of the energy system. The respondent from E.on comments on the disruptive potential of this development:

> "I believe we realize more than anyone else that centralized electricity production is coming to an end."

Respondents had difficulties to rhyme this development with the dominant storyline on increased Europeanization of the energy market. Respondents deal with this discrepancy in different ways. While the respondent of E.on questions the continuation of centralized electricity production, the respondent from the Ministry of Economic Affairs tries to fit this new development to the dominant storyline in the following way:

> "Now we see a divergence to two systems, on the one hand more and more international, with much more interconnections, even larger power plants, especially for industry, I mean Hoogovens[5] will never run on solar panels so to say. And on the other hand we see much more decentralized, small-scale."

[5] A large steel producer in the Netherlands.

As the decentralization trend presents a storyline in the making a lot of questions and doubts around its impact remain. Few respondents discussed the possible need for adaptation of the current market model in order to accommodate decentralized energy production, while one of them even pointed out that decentralization makes it necessary to fundamentally rethink the energy market model as it exists at this moment. Furthermore, decentralization contradicts the notion of an increasingly European energy system in the dominant storyline. It is in these points that conflicts with the dominant storyline arise.

4.3.3. New players entering the energy system

Connected to the decentralization storyline in the making is that of new players entering the energy system. The respondent from the Ministry of Economic Affairs welcomes this development as he believes it fosters market competition:

> "You see that in the market a lot of players, a lot of initiatives originate to stimulate decentralized energy. Cooperatives develop, all kinds of small companies spring up like mushrooms, local governments that want something."

Some respondents from incumbent energy companies see this differently. The respondent of Essent for example proposes to:

> "keep everything that is decentralized outside of the market. Then you at least let the market do its work. [. . .] you should not pollute the market with that."

These two comments reveal underlying disagreement over what constitutes the energy market and what should be left out.

Next to the changes induced by decentralized energy initiatives, incumbents observe large players foreign to the energy system entering. The respondent from VEMW welcomes this trend: "Think about the IT-sector or companies that are very good at marketing products or reaching consumers. Why could companies like Google or Apple not play a role?" For the incumbent energy companies it can be confusing, as the respondent from Essent explains:

> "Things are really changing, the market is changing, different players. IKEA is building more wind turbines than RWE worldwide, Google more solar panels than a lot of others. There are a lot different new players in the market, then what is still the sector? What connects us?"

As the statements show, these new players entering the energy system can be new companies, citizen initiatives in the form of energy co-operatives or large multinationals from other sectors with the potential to shake up the energy system. Respondents from incumbent energy companies generally see the involvement of large players from other sectors such as IKEA and Google as more disruptive than the development of small-scale energy cooperatives. We observe diverging views on whether these new players should be welcomed as an improvement of market functioning, or whether they rather 'pollute' the market. If this divergence increases it could in the longer run undermine the coherence of the dominant storyline.

4.3.4. Natural gas as transition fuel

A prominent storyline in the making is 'natural gas at transition fuel'. This storyline was prominent around the introduction of the coal tax, which has already been mentioned in Section 3. Incumbents involved in natural gas are discursively repositioning themselves in the light of the transition dynamics they face, leading to a divide within the energy regime. The respondent from Energie-Nederland explains that:

> "We had internal discussions about *the coal tax+. Companies that had no coal fired power plant said: 'well it doesn't really affect us, so we do not really care.' Some even said: 'well maybe it even benefits us, because our gas fired power plants are standing idle at the moment' [. . .] so they thought it would not be so bad to introduce a coal tax."

From the other interviews it becomes clear that 'discussion' is an understatement. Incumbents, especially those operating gas fired power plants, experience difficulties in remaining profitable as the marginal costs of gas fired power plants are higher than most other power plants. Therefore, gas fired power plants are standing idle. Lobbying in favour of a coal tax is a concrete consequence of the repositioning efforts of incumbents with natural gas interests. The respondent of Delta observes:

> 'Natural gas is being presented as a preferable transition fuel because of the low CO2- content and the possibility for flexible application."

The natural gas as transition fuel storyline in the making undermines parts of the dominant storyline as it is at odds with a technology neutral government intervention as proposed by market adepts. Furthermore, this discursive positioning of natural gas goes at the expense of coal fired power and strengthens the discursive position of renewable energy, thereby it influences the power balance within the energy regime. We will come back to the (potential) consequences of this development in the next section.

5. Discussion

The need for an 'energy transition' has dominated the respective discourses at all policy levels, also in the Netherlands where incumbents in the Dutch energy system incorporate and use the transition concept to frame the dynamics and align them to their interest- and expectation-based storylines. Respondents from seven incumbent energy companies agree that the main driver for the energy transition is decarbonization and that this should be achieved in a European market, while keeping the energy supply secure and affordable. And this is supported by the other experts interviewed. This is already a change from the dominant discourse of the Dutch energy regime in the 1980s and 1990s in which decarbonization was largely absent and the energy system was organized at a national and regional scale (Verbong and Geels, 2007). Simultaneously, tensions within the currently dominant storyline were encountered relating to differing interpretations of the energy market and the role of the government in the energy transition.

Next to these tensions we uncovered storylines in the making that have the potential to undermine the dominant storyline, relating to Germany's Energiewende, decentralization of the energy system, new players entering the energy market and natural gas as transition fuel. Incumbents struggled to fit these storylines in the making to the dominant one and interpretations often diverged considerably, leading to confusion, insecurity and tensions amongst incumbents: confusion resulted from disagreement over whether new players, such as energy cooperatives, are part of the energy market or rather should be left out. Insecurity about the future was displayed by some respondents stating that it is unclear whether the traditional energy companies will still exist in 20 years from now. Tensions amongst incumbents were observed around introduction of a coal tax, which was supported by incumbents involved in the natural gas business at the expense of those operating coal fired power plants. Respondents react to these misfits in different ways: while some develop narratives that allow for combining these storylines in the making with the dominant one, others start to fundamentally question the dominant storyline. These diverging responses are expected to lead to increasing tensions within the Dutch energy regime, and thus to *discursive regime destabilization*.

With this overview in mind, we now address the research question and further analyse our empirical findings. What is the dominant discourse amongst incumbents in the Dutch energy regime regarding the future of the energy system and which developments put pressure on their discourse? First of all, our empirical analysis shows that the concept 'energy transition' has taken a central role in the discourse of various incumbents involved in the Dutch energy system. Incumbents use the term 'energy transition' to give meaning to the changes they observe in the energy system. What actors mean with the notion of 'energy transition' is largely influenced by their relative discursive position within the energy system, e.g. while most incumbents in this research understand it as a long-term gradual transformation towards a low-carbon energy system via natural gas as transition fuel, other

actors often see it as a radical and swift change to a fully renewable based energy system (e.g. Teske et al., 2007).

It is interesting to note here that amongst respondents there is no fundamental difference of opinion over the long term goals of an energy transition (80–95% CO_2-reduction), however disagreements and conflicts emerge around more concrete concepts such as the energy market, or government intervention towards achieving the overarching goal, such as the coal tax. This has important implications for transition studies and the MLP specifically: New developments at niche level (e.g. energy cooperatives) and events at landscape level (e.g. Fukushima) can perhaps be analytically separated, but our study shows that they play a major role in the dynamics and debates within the regime. Our research proposes a way to study the interactions between the different levels through discursive regime analysis. Our analysis shows that differing interpretations by incumbents of developments at landscape and niche levels can play a role in increasing tensions within a regime. We hypothesize that the tensions that arise from this discursive interplay are manifestations of regime destabilization in face of societal change.

This study has demonstrated that the tensions within the dominant storyline and challenges to it by 'storylines in the making' signals struggle between incumbents within the energy regime, especially in the cognitive 'culture' dimension. This could imply also a growing tension with regard to the power structures that underlie dominant coalitions, institutions and infrastructures. While discursive regime destabilization signals change to the dominant discourse, it remains an open question whether changes in discourse precede changes in the structure of a system (meaning changes in institutions, economic order and/or physical infrastructure).

In this research we found evidence that storylines in the making such as 'natural gas as transition fuel' can open up venues for changes in coalitions and structures when incumbents invested in natural gas interests successfully lobbied for a coal tax in their discursive repositioning efforts at the expense of incumbents invested in coal fired power. We find empirical evidence that reactions were neither univocal nor uniform among incumbents, thereby undermining the coherence of the fossil energy regime. In the face of change pressures, those incumbents involved in business related to natural gas frame their storyline as "partner of renewable energy" and natural gas as "transition fuel" in order to retain their central position within the energy regime. In pushing this frame, some actors are willing to go so far as to advocate structural changes by lobbying for a tax on coal.

Based on the above we hypothesize that such storylines in the making are not merely innocent language, but can lead to discursive repositioning amongst incumbents with implications for the coherence of the regime. It weakens the discursive position of those with stakes in the use of coal and strengthens that of supporters of renewable energy. Furthermore, it suggests that storylines in the making can cascade and shake up long held discursive positions and coalitions that may in turn alter power relations within the regime. Additionally, it could open the door to a renewed lock-in (Unruh, 2000) into natural gas, a fuel that although cleaner than coal, is still fossil, meaning reserves are limited and CO_2 is emitted when burned.

To summarize, our empirical results reveal significant regime dynamics in the Dutch energy system: While several regime elements still exist, the discourse which provides meaning and coherence to these elements seems to fragment and weaken. The conceptualization of a uniform and static regime as often assumed in early transition literature is not adequate and should include more attention towards dynamics over time. Studying such storylines in the making and the discourse coalitions that adopt them provides valuable insights into ongoing transition dynamics.

With this we come to some critical reflections on the applied methodology and research design. Qualitative research is of explorative nature and a certain degree of subjectivity cannot be avoided, e.g. the gathered data could have shown differences even if the same questions would have been asked to the same respondents but at a different moment or by a different researcher. Thus our results represent a snapshot of a dynamic discourse which is influenced by a large variety of factors. Being 'only' a snapshot means we cannot draw definite conclusions but only hypothesize on the discursive changes and how this affects positioning, coalitions and regime structures through time. These hypotheses require testing and validation in future research.

A second aspect that needs to be mentioned was the need to conduct the interviews anonymously except for the interviewees organizational context. Some respondents hinted at the possibility to use this to reconstruct their identity and that consequently they would have to be cautious regarding their statements.

A third point concerns the selection of respondents, which was largely dependent on availability and willingness of actors to participate. In the end, the respondents (see Annex 1) covered a broad range of relevant institutional backgrounds, including small and large businesses, civil servants, interest groups and research institutes. However, despite being invited some actors active in the discourse refused to participate, and thus their storylines may not be adequately represented. Despite these limitations to the research design the explorative approach has allowed for unravelling the dominant storyline, some of its inherent tensions and storylines in the making that challenge the discursive hegemony. It should be seen as a starting point for a further analysis of how the discourse in this regime evolves and its implications for the energy transition.

6. Conclusions

What this research shows is that although different regime elements are still in place, such as coal fired power plants, network infrastructure and energy markets, the discourse with which actors connect these elements and provide meaning and coherence is under stress. This leads to confusion of how different regime elements and actors relate to each other and tensions within the dominant discourse coalition. While this research provides only a snapshot of existing and emerging storylines amongst incumbent actors, regime destabilization is a process, resulting from strings of cascading pressures. We hypothesize that *discursive regime destabilization* – internal regime tension in terms of conflicting (emerging) storylines – might be an indicator for regime dynamics in the acceleration phase of transitions. This hypothesis requires further and more longitudinal research to be confirmed.

Next to its analytical use in describing regime dynamics, exposing regime internal diversity, sensitivities and struggles provides leverage points to delegitimize the dominant storyline by enlarging the inherent tensions and further strengthening storylines in the making. At the same time, we should remain cautious that after initial destabilization a new storyline could be adopted around which the regime reconfigures. Based on this, instead of increasing destabilization, successful adaptation to pressures by incumbents could lead to *regime restabilization* resulting in a stronger energy regime. Further research on ongoing de- and restabilization pathways of energy regimes is needed to shed light on these complex dynamics.

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Annex 1. Overview of interviews in scoping and data collection phase

Scoping phase

(Telephone) interviews with:

Date	Position	Organization
02/05/2012	Senior staff member Energy Transition	Agentschap NL
14/05/2012	Associate	McKinsey & Company
24/05/2012	Researcher	Clingendael International Energy Programme
24/05/2012	Senior Consultant	Squarewise
29/05/2012	Managing Consultant	Ecofys
07/06/2012	Manager Markets and Environment	Energie-Nederland

Data collection phase

Formal interviews with anonymous respondents from:

Date	Organization
08/06/2012	Eneco
12/06/2012	E.on Benelux
22/06/2012	GreenChoice
29/06/2012	Delta N.V.
29/06/2012	Energie-Nederland
05/07/2012	Ministry of Economic Affairs, Agriculture and Innovation (EL&I)
05/07/2012	Ministry of Infrastructure and the Environment (I&M)
06/07/2012	GDF-Suez
09/07/2012	VEMW
10/07/2012	NUON/Vattenfall
11/07/2012	ECN
17/08/2012	RWE/Essent

Annex 2. Interview questions

- How are you involved in energy business, what is your position?
- What are the three most pressing challenges the Dutch energy sector currently faces?
- How do you inform yourself about the developments in the energy sector?
- How does your organization anticipate these challenges?
- What will your organization look like 20 years from now?
- What is the influence of the energy sector on Dutch energy policy?
- If you could employ a full-time researcher, which question should he or she investigate?
- Are there any question(s) you expected that I did not ask?
- Could you recommend other people to interview regarding my research?

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